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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/689,091	10/20/2003	Yuan-Chi Chang	YOR920030385US1 (8728-644)	3809
46069 7590 03/26/2010 F. CHAU & ASSOCIATES, LLC 130 WOODBURY ROAD WOODBURY, NY 11797			EXAMINER HARPER, ELIYAH STONE	
			ART UNIT 2166	PAPER NUMBER
			MAIL DATE 03/26/2010	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/689,091	Applicant(s) CHANG, YUAN-CHI	
	Examiner LEON HARPER	Art Unit 2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-8,11-15,18,19,22-28,30-32,34-36,38 and 39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-8,11-15,18,19,22-28,30-32,34-36,38 and 39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/28/2009 has been entered. Pursuant to said request claims 1, 15, 26, and 38 have been amended. Claims 2-3, 9-10, 16-17, 20-21, 29, 33, 37 have been cancelled, and no claims have been added. Accordingly, claims 1, 4-8, 11-15, 18-19, 22-28, 30-32, 34-36 and 38-39 are pending in this office action.

Response to Arguments

Applicant's arguments with respect to claim 1, 4-8, 11-15, 18-19, 22-28, 30-32, 34-36 and 38-39 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 4-8, 11-15, 18-19, 22-28, 30-32, 34-36, 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,809,507 (hereinafter Cavanaugh) in view of US 5297 279 (hereinafter Bannon) and in further view of US 6, 453, 319 (hereinafter Mattis).

As for claim 1 Cavanaugh discloses: receiving as input an entity definition of a persistent storage structure (See column 8 lines 23-35), wherein the entity definition comprises a declaration of an object (See column 1 lines 55-60), parsing a logical structure of the declared object from the entity definition by a processor (See column 12 lines 12-17), wherein the logical structure includes hierarchical associations between the properties and the data types (See column 21 lines 9-13); generating automatically, by the processor, the persistent storage structure in a persistent storage medium based on the determined logical structure of the declared object (See column 8 lines 55-63); generating automatically, by the processor, an interface within the persistent storage structure, wherein the interface comprises access object classes that are generated automatically by the processor to enable management of object instance data in the persistent storage structure (See column 1 lines 33-37), wherein each object is

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associated with a respective access object class for performing methods including a method for deleting the object instance data associated with the respective access object class (See column 8 lines 20-22, and column 10 lines 28-33)

generating automatically, by the processor, a database table within the persistent storage structure to store the object instance data (See column lines 20-26);

and generating automatically, by the processor, an index to a property of the object if the counter corresponding to the property exceeds a predefined threshold (See column 17 lines 34-42).

Cavanaugh does not explicitly wherein the entity definition comprises one or more properties of the object disclose the and wherein the database table comprises a column for each property of the object and the column includes a counter that is incremented each time the corresponding property is accessed.. Bannon however does disclose: wherein the entity definition comprises a declaration of an object, one or more properties of the object (See figure 6 #64) and Mattis does disclose: wherein the database table comprises a column for each property of the object and the column includes a counter that is incremented each time the corresponding property is accessed (See column 26 lines 1-15 and 28-39) It would have been obvious to an artisan of ordinary skill in the pertinent at the time the invention was made to have incorporated the teaching of Mattis and Bannon into the system of Cavanaugh. The modification would have been obvious because the two references are concerned with the solution to problem of data processing, therefore there is an implicit motivation to

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combine these references. In other words, the ordinary skilled artisan, during his/her quest for a solution to the cited problem, would look to the cited references at the time the invention was made. Consequently, the ordinary skilled artisan would have been motivated to combine the cited references since Mattis's teaching would enable user's of the Cavanaugh system to have run more (See Bannon column 5 lines 30-35, lines 39-46).

As for claim 4, the rejection of claim 1 is incorporated, and further Bannon discloses: wherein the persistent storage structure comprises a file directory (See column 15 lines 35-45).

As for claim 5, the rejection of claim 1 is incorporated, and further Bannon discloses: wherein the persistent storage medium comprises a hard disk, a readable /writable CD or a floppy disk (See column 4 lines 45-55).

As for claim 6, the rejection of claim 1 is incorporated, and further Bannon discloses: wherein the method is implemented in a database system (See column 4 lines 55-65).

As for claim 7, the rejection of claim 6 is incorporated, and further Bannon discloses: wherein the database system is a relational database (See column 4 lines 55-65).

As for claim 8, the rejection of claim 1 is incorporated, and further Bannon discloses: wherein the step of automatically generating an interface for accessing the persistent storage medium comprises automatically creating methods for one of storing, retrieving, and searching, object instance data in the persistent storage medium (See column 4 lines 55-65).

As for claim 9, the rejection of claim 1 is incorporated, and further Cavanaugh discloses: automatically generating an index to persistent stored data (See column 17 lines 34-42).

As for claim 10, the rejection of claim 1 is incorporated, and further Cavanaugh discloses: wherein the step of automatically generating an index to persistent stored data comprises generating an index to persistent stored data that is frequently accessed as determined by a predefined indicator (See column 17 lines 45-55).

As for claim 11, the rejection of claim 1 is incorporated, and further Bannon discloses: automatically adapting the persistent storage structure or the access interface for a new entity definition (See column 15 lines 15-30).

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As for claim 12, the rejection of claim 1 is incorporated, and further Bannon discloses: automatically optimizing the persistent storage system to improve search efficiency or storage scalability (See column 6 lines 10-20).

As for claim 13, the rejection of claim 1 is incorporated, and further Cavanaugh discloses: automatically creating a cache memory for storing object instance data that is accessed from the persistent storage medium based on the index (See column 17 lines 55-61).

As for claim 14, the rejection of claim 1 is incorporated, and further Bannon discloses receiving an object instance declaration automatically populating the persistent storage structure with object instance data (See column 19 lines 50-67)

Claims 15-25 are program storage device claims corresponding to method claims 1-4,8-14 respectively, and are thus rejected for the same reasons as set forth in the rejection of claims 1-4, 8-14.

Claim 26 is a system claim corresponding to the method of claim 1 and is thus rejected for the same reasons as set forth in the rejection of claim 1.

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As for claim 27, the rejection of claim 26 is incorporated, and further Cavanaugh discloses: a database system comprising the persistent storage structure of claim 26 (See column 8 lines 36-42).

As for claim 28, the rejection of claim 26 is incorporated, and further Bannon discloses: an enterprise application comprising the persistent storage structure of claims 26 (See column 1 lines 35-45).

As for claim 29, the rejection of claim 26 is incorporated, and further Cavanaugh discloses: wherein the persistent storage structure comprises a database table (See column 17 lines 50-60).

As for claim 30, the rejection of claim 26 is incorporated, and further Cavanaugh discloses: wherein the persistent storage structure comprises a file directory (See column 22 lines 1-12).

As for claim 31 the rejection of claim 26 is incorporated, and further Bannon discloses: wherein the access methods comprise methods for one of storing, retrieving, searching, and removing object instance data in the persistent storage medium (See column 15 lines 10-20).

As for claim 32, the rejection of claim 26 is incorporated, and further Cavanaugh discloses: wherein the autonomous persistent storage system is an electronic catalog system (See column 22 lines 15-22).

As for claim 33, the rejection of claim 26 is incorporated, and further Cavanaugh discloses: wherein the autonomous persistent storage system further comprises an index creation module for automatically generating an index to persistent stored data (See column 17 lines 45-55).

As for claim 34, the rejection of claim 26 is incorporated, and further Cavanaugh discloses: wherein the autonomous persistent storage system further comprises a cache memory module for automatically storing object instance data that is accessed from the persistent storage medium based on the index (See column 17 lines 55-61).

As for claim 35, the rejection of claim 26 is incorporated, and further Bannon discloses: wherein the autonomous persistent storage system further comprises means for automatically populating a persistent storage structure with object instance data that is input to the system (See column 17 lines 5-20).

As for claim 36, the rejection of claim 26 is incorporated, and further Cavanaugh discloses: An e-service that implements the system of claim 26 for providing a data management service based on a fee agreement or service level agreement (See column 1 lines 50-55).

Claims 37 and 38 are method claims corresponding to the method of claim 1 and is thus rejected for the same reasons as set forth in the rejection of claim 1.

As for claim 39 the rejection of claim 38 is incorporated and further Cavanaugh discloses the step of automatically measuring a frequency of searching by values of a property of the object (See column 17 lines 40-50)

Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEON HARPER whose telephone number is (571)272-0759. The examiner can normally be reached on Flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on (571) 272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*/LEON HARPER/
Examiner, Art Unit 2166
March 25, 2010*